

Rec'd PCT/REG 24 MAR 2005

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
29 April 2004 (29.04.2004)

PCT

(10) International Publication Number  
WO 2004/036675 A3

(51) International Patent Classification<sup>7</sup>: H01M 8/04, [JP/JP]; 6-47-306, Funakoshi-cho, Yokosuka-shi, Kanagawa 237-0076 (JP). 8/02, 8/04

(21) International Application Number: PCT/JP2003/013054 (74) Agent: GOTO, Masaki; Shoyu-Kaikan, 3-1, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo 100-0013 (JP).

(22) International Filing Date: 10 October 2003 (10.10.2003) (81) Designated States (*national*): CN, KR, US.

(25) Filing Language: English (84) Designated States (*regional*): European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR).

(26) Publication Language: English (30) Priority Data: 2002-301448 16 October 2002 (16.10.2002) JP Published: — with international search report

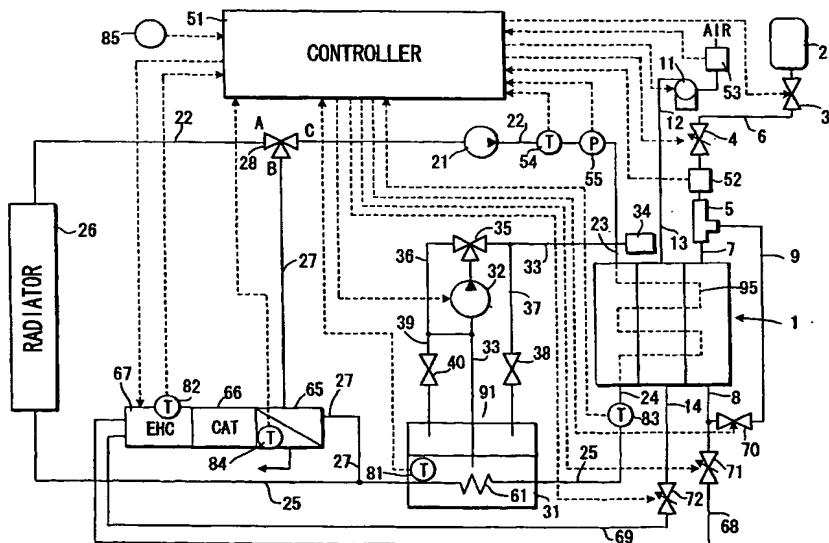
(71) Applicant (*for all designated States except US*): NISSAN MOTOR CO., LTD. [JP/JP]; 2, Takara-cho, Kanagawa-ku, Yokohama-shi, Kanagawa 221-0023 (JP). (88) Date of publication of the international search report: 17 February 2005

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: FUEL CELL SYSTEM



(57) Abstract: A fuel cell system has a fuel cell (1) performing power generation as a result of reactions in a supplied gases, a humidifying device (34) for humidifying the at least one supplied gas by using water from water tank (31), and a coolant temperature regulation device (21, 22, 25, 26, 27, 28, 51) for regulating the temperature of the coolant flowing within the fuel cell (1) in order to control the temperature of the fuel cell (1), and a defrosting device (61). The defrosting device (61) melts ice in the water tank (31) during a startup operation of the fuel cell system (1) by applying heat contained in the coolant to the ice. which Here, the coolant has an increased temperature as a result of heat exchange with waste heat produced during power generation inside the fuel cell (1).

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# INTERNATIONAL SEARCH REPORT

International Application No

JP 03/13054

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC 7 H01M8/04 H01M8/02 H01M8/04

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
 IPC 7 H01M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 428 919 B1 (TAKAHASHI HIDEO ET AL) 6 August 2002 (2002-08-06) column 1, line 50 - column 2, line 13 column 3, line 40 - column 4, line 53 column 7, line 30 - column 8, line 15 -----	1-10
A	US 6 432 568 B1 (BORUP RODNEY LYNN ET AL) 13 August 2002 (2002-08-13) column 1, line 57 - column 2, line 13 column 3, line 5 - line 10 column 3, line 26 - column 4, line 28 ----- -/-	1-10

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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Date of the actual completion of the International search

18 November 2004

Date of mailing of the International search report

25/11/2004

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International Application No

PCT/JP 03/13054

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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P,A	WO 03/081704 A (NISSAN MOTOR ; OGAWA SOICHIRO (JP)) 2 October 2003 (2003-10-02) page 2, line 21 – page 3, line 13 page 6, line 8 – page 8, line 15 -----	1-10
A	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 14, 5 March 2001 (2001-03-05) -& JP 2000 315514 A (NISSAN MOTOR CO LTD), 14 November 2000 (2000-11-14) abstract -----	1-10

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Information on patent family members

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